AMENDMENTS TO THE CLAIMS

1. **(currently amended):** A device for reading and analyzing chips, comprising:

- ~~(a)~~ a table for receiving a chip intended to characterize at least one sample~~;~~;

- ~~(b)~~ means of exciting the molecules or the cells of the chip, after reaction with other molecules~~;~~;

- ~~(c)~~ means of reading and analyzing the molecules subjected to excitation~~;~~;

~~characterized in that the device also comprises:~~

- ~~(d)~~ a unit for controlling the temperature of said table, said control unit being connected to a module ~~(111)~~ consisting of a plurality of Peltier-type heating/cooling elements arranged opposite various spots on the surface of the table; and~~,~~

- ~~(e) and~~ at least one table temperature sensor ~~(112)~~ also connected to said control unit.

2. **(currently amended):** The device as claimed in ~~the preceding claim~~claim 1, ~~characterized in that~~wherein the excitation means comprises a broad-spectrum lamp and at least one laser.

3. (currently amended): The device as claimed in ~~either of the preceding claims~~claim 2, ~~characterized in that~~ wherein the laser is a laser whose radiation is centered on a wavelength of the order of 635 nm.

4. (currently amended): The device as claimed in ~~one of the preceding claims~~claim 2, ~~characterized in that the reader~~wherein said reading means comprises several lasers.

5. (currently amended): The device as claimed in ~~the preceding claim~~claim 4, ~~characterized in that~~wherein the lasers are centered on the same wavelength.

6. (currently amended): The device as claimed in ~~one of the preceding claims~~claim 1, ~~characterized in that~~wherein the excitation means comprises at least one laser associated with a module for scanning of its beam so as to excite the molecules to be analyzed.

7. (currently amended): The device as claimed in ~~the preceding claim~~claim 6, ~~characterized in that~~wherein ~~the reader~~said reading means comprises two lasers and the modules

for scanning of the two lasers control two respective scans of the molecules in two orthogonal directions.

8. (currently amended): The device as claimed in ~~one of claims 1 to 5~~claim 1, ~~characterized in that~~wherein the excitation means comprises at least one laser assembly comprising a laser whose radiation is guided by an optical fiber.

9. (currently amended): The device as claimed in ~~the preceding claim~~claim 8, ~~characterized in that~~wherein the excitation means comprises two identical laser assemblies.

10. (currently amended): The device as claimed in ~~one of claims 1 to 5~~claim 1, ~~characterized in that~~wherein the excitation means comprises a fixed laser ~~(132")~~ which directs its beam toward two successive mirror assemblies mounted in series, and the movement of which is controlled along two different directions.

11. (currently amended): The device as claimed in ~~the preceding claim~~claim 10, ~~characterized in that~~wherein the movement of the two mirror assemblies is controlled so as to produce a beam which can follow any desired sequence on the chip.

12. (currently amended): The device as claimed in ~~one of claims 1 to 5~~claim 1, ~~characterized in that~~wherein the excitation means comprises a lamp and a laser whose radiations follow the same optical path due to a swinging mirror ~~(130)~~ that can pivot around an axis ~~(1300)~~ between two positions so as to direct one of these two radiations toward the chip.

13. (currently amended): The device as claimed in ~~one of the preceding claims~~claim 12, ~~characterized in that~~wherein an optical system is interposed between the lamp and the molecules to be excited, ~~whereas~~ and wherein the laser excitation takes place by direct illumination of the molecules.

14. (currently amended): The device as claimed in ~~the preceding claim~~claim 13, ~~characterized in that~~wherein said optical system comprises narrow bandwidth excitation light filters and narrow bandwidth emission light filters, and a beam separator.

15. (currently amended): The device as claimed in ~~one of the preceding claims~~claim 1, ~~characterized in that~~wherein ~~the reader~~said reading means also comprises an excitation control unit connected to each of the excitation means in order to control the functioning thereof.

16. (currently amended): The device as claimed in ~~the preceding claim~~claim 15, ~~characterized in that~~wherein said excitation control unit is capable of selectively controlling the simultaneous or successive illumination of the molecules with the lamp and at least one laser, or the separate excitation of the molecules with the lamp and at least one laser.

17-19. (canceled).

20. (currently amended): The device as claimed in ~~one of the three preceding claims~~claim 1, ~~characterized in that~~wherein ~~the reader~~said reading means also comprises a processing means comprising a microprocessor ~~and~~ connected to the temperature control unit and ~~also to the~~said reading means.

21. (currently amended): The device as claimed in ~~the preceding claim~~claim 20, ~~characterized in that~~wherein ~~the reader~~ said reading means comprises means of storing reference curves of the response of the matches and mismatches of the molecules to the excitation means as a function of the temperature.

22. (currently amended): The device as claimed in ~~the preceding claim~~claim 21, ~~characterized in that~~wherein the storage means are connected to means for determining a melting temperature for the matches and mismatches of the molecules, from said reference curves.

23. (currently amended): The device as claimed in ~~one of the six preceding claims~~claim 1, ~~characterized in that~~wherein the temperature control unit is capable of controlling the functioning of the reader according to a "static" mode in which pre-established reference curves of the response of the matches and mismatches of the molecules as a function of the temperature are used to establish a set temperature that can be transmitted, by said temperature control unit, so as to control the temperature of said table.

24. (currently amended): The device as claimed in ~~one of the seven preceding claims~~claim 1, ~~characterized in that~~wherein the temperature control unit is capable of controlling the functioning of the ~~reader~~ reading means according to a "dynamic" mode in which the temperature control unit controls a given change in temperature on the table, and, during this change in temperature:

- ~~(i)~~ the reading means collect, in real time, the response of the molecules associated with the various spots on the chip to the excitation by the excitation means, and transmit said response to processing means ~~(18)~~, and;

~~(ii)~~ storage means store, for each spot on the chip, the change in response of the molecule as a function of the temperature.

25. (currently amended): The device as claimed in ~~the preceding claim~~claim 24, ~~characterized in that~~wherein the ~~reader~~ reading means comprises processing means capable of establishing, for each molecule, at the end of the storage of said change in response, a diagnosis of state of the molecule.

26. (currently amended): The device as claimed in ~~the preceding claim~~claim 25, ~~characterized in that~~wherein said diagnosis of state is a match/mismatch diagnosis.

27-33. (canceled).